

COMBRETUM TRIFOLIATUM VENT. (COMBRETACEAE) A NEW RECORD FOR AUSTRALIA

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Summary

The genus *Combretum* Loebl. (Combretaceae) is recorded for the first time from Australia with the discovery of *C. trifoliatum* Vent. in northern Cape York Peninsula. The species is described and figured from Australian material. A key to the Australian genera of Combretaceae is given.

Combretum Loebl. is a genus of about 250 species which is widespread throughout the tropics of both the Old and New World being most abundant in Africa (Exell 1954). This is the first record of the genus from Australia. The species was discovered independently by both authors in the course of plant collecting on Cape York Peninsula.

The description and illustration presented here are based solely on Australian material. According to Exell (1954) the flowers shrink considerably on drying. Although fluid preserved material was available for study only dried flowers were used for measurements given in the description to allow for valid comparison with previous published descriptions.

***Combretum trifoliatum* Vent., Choix Pl. t. 58 (1808)**

Vigorous woody climber to 15 m tall. Mature stems to 3 cm diam., with a flaky bark. Young stems twining in an anticlockwise direction (externe vis.), densely pubescent with brown, simple hairs 0.1-0.2 mm long and scattered, white, simple hairs 0.4-0.5 mm long. Leaves opposite or in whorls of 3 (or 4), simple, exstipulate; petiole (3-) 5-7 (-9) mm long, densely pubescent with short, brown, simple hairs; leafblade ovate to elliptic, (7-) 9-13 (-15) cm long, (3.5-) 4.5-6 (-7.5) cm wide, chartaceous, somewhat discoloured, sparsely pubescent beneath when young, glabrescent except for domatia on lower surface and occasional short, brown, simple hairs along the mid-vein on both upper and lower surfaces; base obtuse; margin entire; apex acute to obtuse; venation reticulate, unicostate, campitodromous; mid-vein impressed above, raised beneath; primary lateral veins 6-8 pairs, plain above, slightly raised beneath. Inflorescence terminal and axillary, an open panicle of spikes or occasionally a simple spike; spikes (2-) 3-5 cm long, on peduncles (0.5-) 1-1.5 (-2) cm long, 25-50-flowered; bracts linear, 2-2.5 mm long, 0.2-0.3 mm wide, sericeous, caducous. Flowers regular, 5-merous, bisexual, protogynous, white to cream; calyx tube clearly divided into a lower part surrounding and adnate to the ovary 1.5-2 mm long and an upper cupuliform part 0.75-1.1 mm deep \times 2.4-2.6 mm wide, densely sericeous on both inner and outer surfaces; calyx lobes 5, narrowly triangular, 0.9-1.2 mm long, sericeous; petals 5, inserted in a single series at the mouth of the receptacle, lanceolate, 1-1.2 mm long, 0.3-0.4 mm wide, sericeous; stamens 10, exserted, erect and spreading at anthesis, adnate to wall of receptacle, inserted in 2 series, those opposite sepals at base adjacent to disc, those opposite petals higher about mid way between disc and orifice; filaments filiform, 3.5-4.5 mm long, glabrous, anthers oblong, 0.3 mm long, 2-celled, medifixed, versatile, opening by longitudinal slits; disc prominent, irregularly lobed, densely barbate; ovary inferior, unilocular, with 2 pendulous anatropous ovules; style terminal, 3.5-5 mm long, glabrous or with a few long, straight hairs on the lower two-thirds; stigma terminal, ca 1 mm diameter. Fruit sessile, oblanceolate to narrowly elliptic in outline, star-shaped in cross section, (3-) 3.5-4 mm long, 1-1.2 cm wide, with 5 rigid wings, indehiscent; pericarp coriaceous, shiny dark brown, glabrous. Fig. 1.

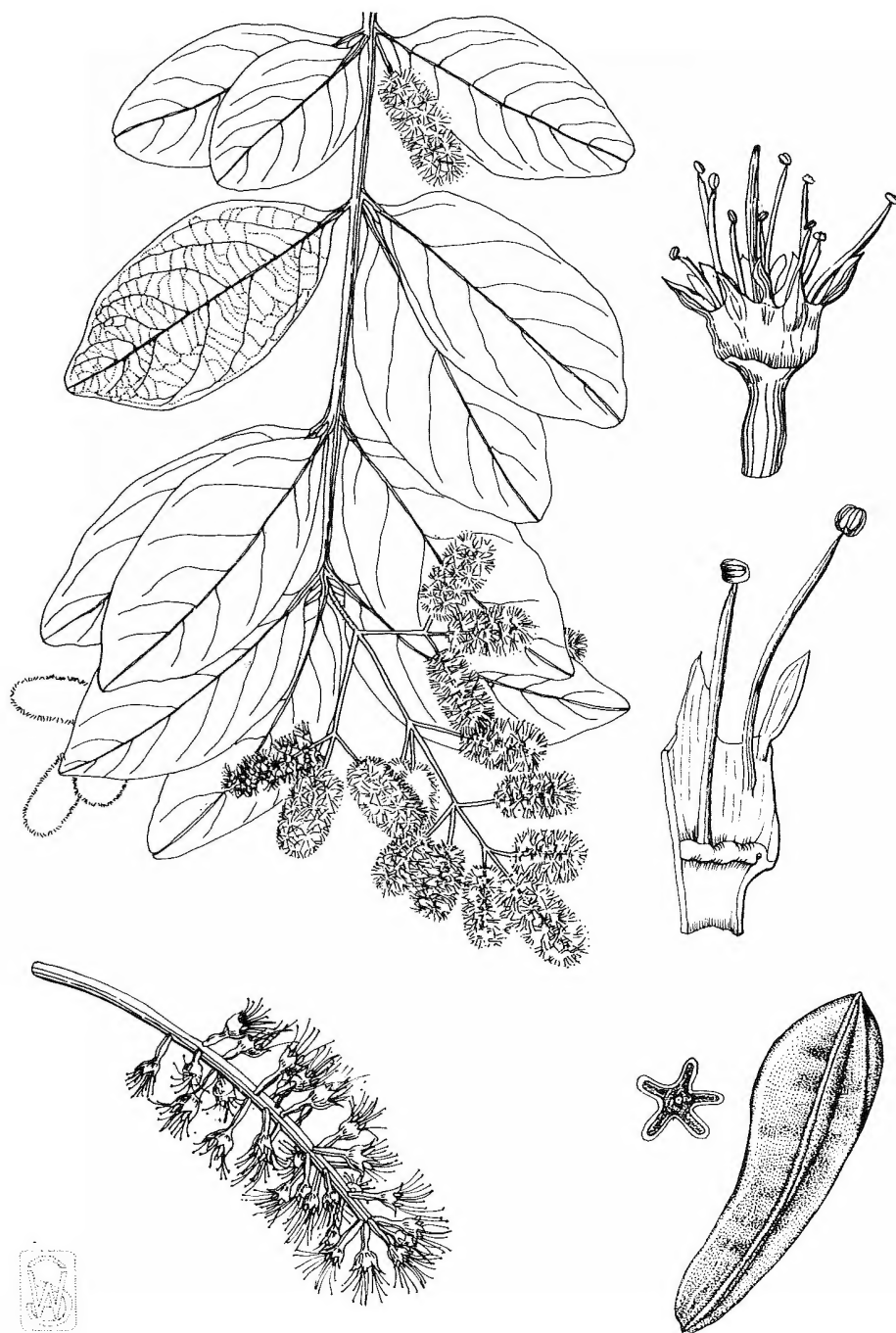


Fig. 1. *Combretum trifoliatum*: A. flowering branch $\times 1/2$. B. flower (hairs not shown) $\times 4$. C. partly dissected flower (hairs not shown) $\times 4$. D. mature fruit $\times 1$. E. cross section of mature fruit $\times 1$. A-C from Clarkson 4989, E & F from Clarkson 5650.

Distribution: Within Australia the species is known only from the Wenlock River, north-east of Weipa, where it is a common vine on the margins of closed forest along the river banks. Exell (1954) shows the extra-Australian distribution extending from Burma south through Southeast Asia to Malaysia and east through Indonesia to Papua New Guinea.

Specimens examined: Irian Jaya: Bernhard Camp, Idenburg R., Apr 1939, *Brass* 13786 (BRI); Bernhard Camp, Idenburg R., Apr 1939, *Brass* 14043 (BRI); Merau R., N of the mouth of the Wanggoe R., Aug 1954, *van Royen* 4680 (BRI). Papua New Guinea: Yellow R., near Sepik R., Oct 1949, *Womersley* NGF 3893 (BRI); Lake Daviumbu, Middle Fly R., Sep 1936, *Brass* 7709 (BRI); Balamuk, near Bensbach, Sep 1979, *Painup* s.n. [QRS 069719]. Australia: Queensland. COOK DISTRICT: Wenlock R., Stone Crossing (12°23'S, 142°10'E), Oct 1980, *Hyland* 10689 (QRS), 10755 (QRS), 21086V (QRS), Aug 1983, *Clarkson* 4989 (BRI, CANB, DNA, K, L, MO, NSW, PERTH, QRS, SAR); S bank of Wenlock R. at Stone Crossing on Weipa to Bertihough rd, Nov 1984, *Clarkson* 5650 (BRI, CANB, DNA, K, L, MO, NSW, PERTH, QRS, SAR); Wenlock River, upstream from islands (12°15'S, 142°01'E), Feb 1985, *Gunness* AG1894 (BRI, QRS).

Combretum is readily distinguished from other Australian genera of Combretaceae by its twining habit, the lack of bracteoles adnate to the receptacle and the free style. Since the publication of Byrnes's revision of the Australian Combretaceae (Byrnes 1977) this is the second genus added to the family in Australia. The first was *Dansiea* which was erected in 1981 for a large, rainforest tree from coastal north Queensland (Byrnes 1981). The following key distinguishes the five native Australian genera and one exotic genus which has become naturalised in places.

Key to the Australian Genera of Combretaceae

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|--|------------------------|
| 1. Receptacle without adnate bracteoles | 2 |
| Receptacle with two adnate bracteoles | 4 |
| 2. Petals absent, flowers bisexual or staminate | Terminalia |
| Petals present, flowers bisexual | 3 |
| 3. Style adnate to the receptacle for part of its length | Quisqualis* |
| Style free, not adnate to the receptacle | Combretum |
| 4. Ovules 2-5 | Lumnitzera |
| Ovules 6 or more | 5 |
| 5. Disc narrow, cupular; ovules 6-12 | Macropteranthes |
| Disc bi-lobed, gland-like; ovules 14-20 | Dansiea |

* Naturalised alien

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